



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
REGION 4  
ATLANTA FEDERAL CENTER  
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ATLANTA, GEORGIA 30303-8960

**NOV 08 2019**

Mr. Jim Craig  
Senior Deputy and Director  
Office of Health Protection  
Mississippi State Department of Health  
570 East Woodrow Wilson  
P.O. Box 1700  
Jackson, Mississippi 39215-1700

Dear Mr. Craig:

As required by Title 40 of the Code of Federal Regulations §142.17, the U.S. Environmental Protection Agency Region 4 conducted an Annual Review of the Public Water System Supervision (PWSS) Program administered by the Mississippi State Department of Health (MSDH) for Fiscal Year 2018. The evaluation focused on core PWSS Program elements such as rule adoption and implementation, sanitary surveys, data management, lab certification and enforcement. In addition, it considered other programs and issues that support implementation of the PWSS Program, including capacity development, operator certification, and state resources. For this effort, we relied on existing information already reported to the EPA by the State as well as information gathered through routine meetings and correspondence with representatives of MSDH's PWSS Program.

Overall, the EPA concluded that the MSDH continues to implement an effective drinking water program. Please review the report and provide comments to the EPA within 14 days. If you have questions regarding any aspect of the report or the evaluation process, please contact me or have a member of your staff contact Mr. Robert Burns, of the Drinking Water Section at (404) 562-9456.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Gettle", is positioned above the typed name.

Jeaneanne M. Gettle, Director  
Water Division

Enclosure



# **Annual Review of the Public Water System Supervision Program for the State of Mississippi**

**Fiscal Year 2018**

**October 1, 2017 – September 30, 2018**

**Report Date: September 24, 2019**

### Summary of State Drinking Water Program

Pursuant to 40 C.F.R. § 142.17, the U.S. Environmental Protection Agency (EPA) Region 4 conducted an end-of-year evaluation of the FY 2018 Public Water System Supervision (PWSS) program, administered by the Mississippi State Department of Health, Bureau of Public Water Supply (MSDH). In FY 2018 MSDH regulated 1,182 active public water systems (PWS) that collectively serve 3.1 million customers. This water system inventory includes 1,044 community water systems (CWS), 68 non-transient non-community water systems (NTNCWS), and 70 transient non-community water systems (TNCWS). Table 1 shows the EPA National Water Program Measures and targets as well as baseline data and the 2018 results for the EPA Region 4 and the State.

**Table 1: EPA National Water Program Measures – Mississippi**

EPA National Water Program Measures	What EPA Tracks	EPA National FY 2018 Target	Region 4 Baseline <sup>1</sup>	Region 4 FY 2018 Result <sup>2</sup>	State Baseline	State FY 2018 Result
B01. By September 30, 2022, reduce the number of community water systems out of compliance with health-based standards to 2,700. Baseline is 3,600 as of FY 2017.	Number of community water systems out of compliance with health-based standards	Reduce by 182	318	282	22	17
S04. By September 30, 2022, reduce the number of community water systems out of compliance due to health-based violations of the Lead and Copper Rule by 50 percent. Baseline is 308 as of FY 2017.	Number of community water systems out of compliance due to health-based violations of the Lead and Copper Rule	Not Applicable	53	45	0	1
S01.1. By December 31, 2022, increase the percent of community water systems that have undergone a sanitary survey within the past three (3) years (five (5) years for outstanding performers or those ground water systems approved by the primacy agency to provide 4-log treatment of viruses) to 98.	Percent of drinking water sanitary surveys completed	92%	90.28%	95.04%	85.0%	93.2%

### State Resources

MSDH was awarded its FY 2018 PWSS grant allocation through a Direct Continuing Environmental Program Grant. This direct grant contains two (2) years of EPA funding for the PWSS Program in FY 2017 – FY 2018. The MSDH FY2018 PWSS grant allocation was \$1,186,000.

<sup>1</sup> All baseline data is from 3<sup>rd</sup> Quarter 2017.

<sup>2</sup> All results data is from 3<sup>rd</sup> Quarter 2018 except S01.1, which is from 4<sup>th</sup> Quarter 2018.

The Mississippi Drinking Water State Revolving Fund (DWSRF) received \$2,184,840 in capitalization grant set asides for FY 2018. Set asides included \$239,140 for Small Systems Technical Assistance; \$1,195,700 for State Program Management and \$750,000 for Local Assistance.

#### **Status of Rule Adoption/Primacy**

The EPA Region 4's Drinking Water Program has been working to reduce the backlog of primacy applications under review, and reduction of this backlog is one of the national measures for the program. Mississippi has adopted regulatory authority for all required federal PWSS Program rules promulgated to date. The EPA has formally approved primacy applications submitted by MSDH for all except the following PWSS Program rule: Revised Total Coliform Rule. Because the State has submitted a complete final primacy application to the EPA, Mississippi has interim primacy for the Revised Total Coliform Rule.

**Table 2: Status of Rule Adoption/Primacy**

<b>Rule</b>	<b>Date of Rule Adoption by State</b>	<b>Primacy Application Status</b>
Administrative Penalty Authority	4/1/2000	Approved 8/1/2001
New PWS Definition	4/1/2000	Approved 8/1/2001
Consumer Confidence Report Rule	4/1/2000	Approved 8/1/2001
Interim Enhanced Surface Water Treatment Rule	12/16/2000	Approved 5/1/2003
Stage 1 Disinfectants and Disinfection Byproducts Rule	12/16/2000	Approved 5/1/2003
Lead and Copper Rule Minor Revisions	10/10/2001	Approved 7/1/2002
Public Notification Rule	5/4/2002	Approved 5/1/2003
Radionuclides Rule	12/9/2004	Approved 2/16/2006
Arsenic and Clarifications to Compliance and New Source Contaminants Monitoring Rule	12/9/2004	Approved 2/16/2006
Filter Backwash Recycling Rule	12/9/2004	Approved 2/16/2006
Long Term 1 Enhanced Surface Water Treatment Rule	7/24/2012	Approved 8/11/2014
Stage 2 Disinfectants and Disinfection Byproducts Rule	7/24/2012	Approved 8/11/2014
Long Term 2 Enhanced Surface Water Treatment Rule	7/24/2012	Approved 8/11/2014
Ground Water Rule	7/24/2012	Approved 8/11/2014
Lead and Copper Rule Short-Term Revisions and Clarifications	7/24/2012	Approved 8/11/2014
Revised Total Coliform Rule	2/25/2016	Notice of Intended Approval Published in <i>Federal Register</i> 9/6/2019

#### **Sanitary Surveys**

Under 40 C.F.R. § 142.16, states must conduct sanitary surveys for CWSs no less frequently than every three (3) years or five (5) years for outstanding performers. For NTNCWSs and TNCWSs, sanitary surveys must be conducted at least once every five (5) years.

Among CWSs, MSDH exceeded the federal goal for completing sanitary surveys once every three (3) or five (5) years (depending on system performance history). As of September 30, 2018, sanitary surveys for 97.2 percent of CWSs were completed within their required schedule.

MSDH Regional Engineers are responsible for conducting sanitary surveys of PWSs in Mississippi. Under an approach more protective than federal requirements, all categories of PWSs are scheduled to have a sanitary survey completed every three (3) years. Regional engineers complete their assigned sanitary surveys according to the State's fiscal year schedule (July 1 to June 30). For CWSs and NTNCWSs, MSDH uses a Capacity Assessment Rating (CAR) to evaluate the technical, managerial, and financial capacity of systems during sanitary surveys. MSDH's CAR method is a transparent and efficient method to match systems with technical or financial assistance. MSDH defines significant deficiencies in each of the eight required sanitary survey components. Most commonly identified significant deficiencies among Mississippi water systems include: inadequate internal cleaning/maintenance of storage tanks, lack of redundant mechanical components where treatment is required, and improperly constructed wells.

#### **Enforcement**

The EPA works closely with all eight (8) states to address non-compliant systems and reduce the number of priority systems. On a quarterly basis, the EPA evaluates the Enforcement Targeting Tool (ETT) and provides reports to the states. If needed, the EPA holds meetings with the state to discuss new systems on the ETT, challenges with addressing the ETT and any overall PWS enforcement program implementation issues. During FY 2018, MSDH had 12 or less priority water systems, which represents 1 percent of the total number of PWSs in Mississippi.

*The EPA Drinking Water Enforcement Response Policy (December 8, 2009)*<sup>3</sup> established six-months as the standard for states to address with formal enforcement or return to compliance (RTC) systems that have an ETT score greater than or equal to 11 (priority systems). On a quarterly basis, the EPA and the State discuss the challenges of systems that have been on the ETT list for a prolonged period (greater than 3 quarters) and possible Regional actions to return the system to compliance. Additionally, any system that had a formal enforcement action that was two (2) years or older and remained in non-compliance was added to the ETT list regardless of the current ETT score. The EPA discussed these systems with MSDH to determine if the current enforcement was effective in obtaining RTC.

The EPA compares each state's performance to the Annual Commitment System (ACS) SDWA02 commitment. The ACS SDWA02 commitment is defined as "address with a formal enforcement action or RTC the number of priority systems equal to the number of PWSs that have a score of 11 or higher on the July 2018 ETT report." This commitment is incorporated into each state's annual PWSS grant workplan and is used as a tool to evaluate progress towards addressing priority systems. MSDH successfully met the FY 2018 ACS SDWA02 commitment for Mississippi based on the Safe Drinking Water Information System (SDWIS)/Federal data (See Table 3).

**Table 3: Systems that are Addressed or Resolved (for systems that scored  $\geq 11$  during FY 2018 Database: October 2018 SDWIS/Federal Freeze (For most states, this includes data through June 30, 2018))**

State	FY 2018 ACS Commitment	Overall Systems Addressed in FY 2018
MS	16	18

<sup>3</sup> Available at <https://www.epa.gov/enforcement/enforcement-response-policy-public-water-system-supervision-pwss-program-under-safe>.

In April 2017, the EPA Region 4 Priority Review team conducted an onsite visit at MSDH. One of the elements of the PWSS Program that the team reviewed was the enforcement program. The purpose of the enforcement component of the Priority Review was to evaluate any MSDH enforcement strategies or practices to determine if these practices were consistent with the EPA Drinking Water Enforcement Response Policy and were being followed for all systems.

During interviews conducted prior to and during the 2017 review, it was determined that MSDH does not have any written enforcement management strategies or standard operating procedures (SOPs) for the compliance and enforcement program.

The draft priority review report contained the EPA's recommendations for MSDH to develop Enforcement SOPs. The recommendation was that the SOP address at a minimum:

- The expectation to address those water systems identified as priority systems on the ETT List within two (2) quarters of appearance on the list, either by returning such system to compliance or issuing formal and enforceable mechanisms to return such system to compliance as well as to act immediately on acute, health-based violations and subsequently confirm that systems with such violations return to compliance. This would help to ensure that the State is consistent with the EPA Enforcement Response Policy, the State's PWSS Grant Workplan, and that the State is consistently implementing the compliance and enforcement program throughout all drinking water staffed districts.
- Description of current enforcement process from start to finish, including defining the available mechanisms used and generally when each would be used or escalated.
- Update the enforcement documents and/or develop models that include the identification of the actual violations triggering the activity and define how the system is to return to compliance including required timeframes to complete such activities.
- Establish procedures on what dates should be reported to SDWIS/State for the enforcement activities, to ensure that all staff are using the same date consistently.

MSDH does not yet have a formal enforcement standard operating procedure. The EPA is working with MSDH to resolve this need. MSDH recently hired a staff member who is primarily assigned to the enforcement process and this should help MSDH address the recommendations from the Priority Review draft report. MSDH does have the draft Priority Review report and provided no specific response to EPA regarding the recommendations on the needed enforcement SOPs.

The EPA Region 4 will be working with MSDH in 2019, to ensure that they have completed SOPs for their Compliance and Enforcement Program.

#### ***DWSRF Program Integration: Capacity Development and Small System Support***

MSDH uses its CAR program and SDWA compliance to identify water systems in need of capacity assistance. A MSDH regional engineer assesses the performance of each CWS and NTNCWS during the annual compliance inspection or sanitary survey. The rating is determined using Capacity Assessment Forms, which consist of technical, managerial, and financial questions designed to identify tasks that a system must routinely accomplish to demonstrate its capacity to comply with current and proposed SDWA requirements. The rating scale ranges from "0" (minimum) to "5.0" (maximum). Using DWSRF set-aside funding, MSDH utilizes technical assistance contractors to provide free technical assistance to low-scoring systems and systems in long-term non-compliance. MSDH provides technical assistance organizations an annual list of systems in need of assistance. The contractors provide periodic reports to MSDH regarding the benefits of their assistance efforts.

Most of the CWSs (95 percent) in Mississippi are classified as small systems (service populations less than or equal to 10,000). Many of these systems benefit from assistance provided by MSDH and its partner



organizations. During FY 2018, activities undertaken in some of the assistance program areas are outlined below:

1. *Comprehensive and Intermediate Technical Assistance.* Through a DWSRF-funded contract with MSDH, Communities Unlimited (CU) provides one-on-one assistance to PWSs to improve their capacity ratings. CWSs are strongly encouraged to utilize available assistance to increase their ratings. MSDH ranks systems by their capacity assessment rating and sends letters to the lowest performing systems. If a system refuses assistance, MSDH may take future compliance actions on that system. The CWS receives targeted and specialized assistance based on the specific system's needs. Often, many CWSs need to make policy and management adjustments, which can take several months or longer to complete. During FY 2018, CU provided comprehensive and intermediate assistance to 10 CWSs.
2. *PEER Review Program.* This voluntary program pairs a selected group of water system operators with other operators to assist them in preparing for annual MSDH inspections. MSDH provides the Mississippi State University Extension Service (MSU-ES) a list of low-ranking systems. MSU-ES sends a letter to the referred CWSs to determine their interest in participating in the PEER Review Program. If the system is interested, MSU-ES personnel coordinate a meeting with the PEER Review team and at least one system operator and a responsible official. During the meeting, all components of the capacity assessment are performed. After the meeting, the PEER Review team gives the reviewed system a report which outlines issues and suggestions for improvement. The PEER Review Program primarily emphasizes technical components while providing limited managerial and financial assistance. During FY 2018, the PEER Review team assisted 14 CWSs.
3. *Hands-On Operator Training.* The Mississippi Rural Water Association provides small system operators specialized "hands-on" training and skills which enable them to effectively operate water systems. The training sessions, held throughout the State, provide participants with hands-on experience, such as meter and chlorinator repair, fire hydrant maintenance, leak detection, etc. The operators' newly acquired skills may lead to potential cost savings to the water systems since operators no longer have to outsource all repairs.
4. *Board Management Training.* State law requires newly-elected board members of private, non-profit water systems and officials of municipal water systems with a population of 10,000 or fewer to receive training in their duties and responsibilities. MSU-ES coordinates with other selected training partners to deliver this training throughout the State. During FY 2018, MSU-ES administered 20 Board Management Training sessions to 544 board members and managers representing 275 public water systems. In FY 2019, MSDH plans to deploy an online Board Management Training to reduce the number of untrained board members and PWS managers.

#### ***DWSRF Program Integration: Operator Certification***

Mississippi's regulation governing the certification of operators of public water systems was promulgated under the authority of the Municipal and Domestic Water and Wastewater System Operator's Certification Act of 1986. This law made the certification of operators mandatory after July 1, 1987. In Mississippi, certified operators are required for community and non-transient non-community water systems. MSDH issues and renews operator certificates. Water systems are classified according to specific criteria included in Mississippi's regulations. Operator qualifications are commensurate with the complexity of operating these systems.

In their Public Water Supply Annual Report, the owner or responsible official of the system designates the operator in responsible charge of the system. In 2018, certified operators were required at 1,040 CWSs and 70 NTNCWSs; however, 6 community systems<sup>[JAE1][CS2][BR3]</sup> and 1 non-transient non-community system did not have a certified operator. If a system fails to hire a certified operator and/or provide their Public Water Supply Annual Report, MSDH may issue an enforcement action to the system.



The new Waterworks Operator Database is expected to improve the certification and renewal process. Operators will be able to track their training credits. Depending on experience, Mississippi operators are required to have up to 48 hours of continuing education in each 3-year certification period.

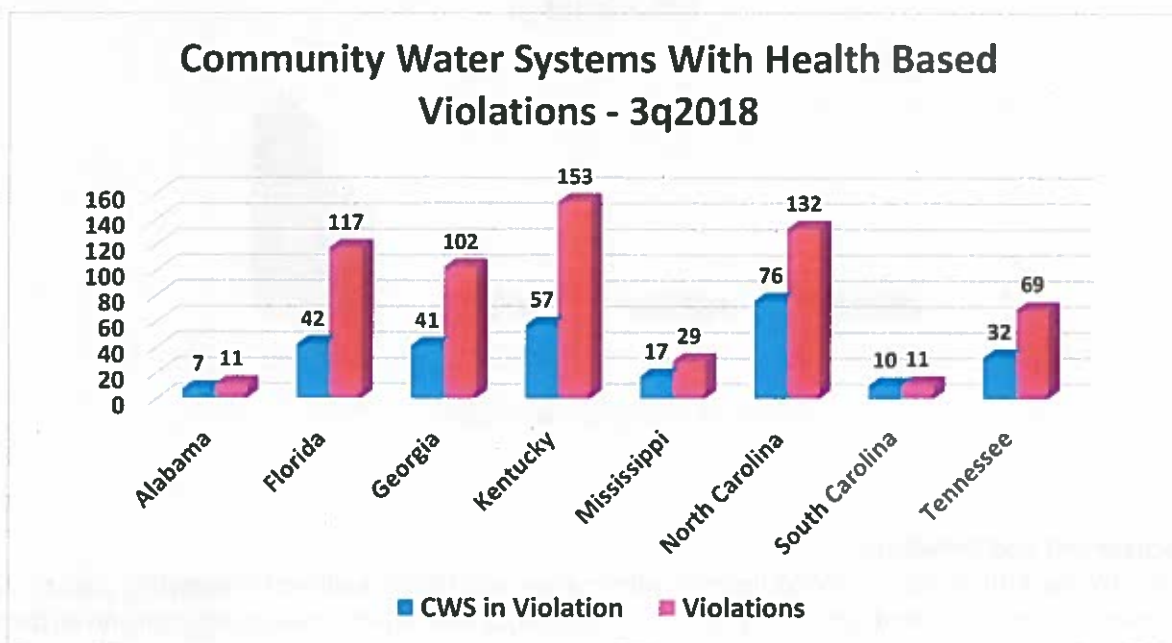
The State continues to meet the public health objectives and nine (9) baseline standards under the provisions to the 1986 Safe Drinking Water Act Amendments. The most recent Operator Certification program annual submittal was approved on August 29, 2019 by EPA.

### Rule Implementation

The EPA's FY 2018–FY 2022 Strategic Plan<sup>4</sup> Goal 1, Objective 1.2, Strategic Measure (SM-2) is to reduce the number of CWSs out of compliance with health-based standards to 2,700 by September 30, 2022. This is a national measure and is also referred to as the EPA's "Breakthrough Measure" for drinking water. The data source for the measure is the EPA's SDWIS Federal Data Warehouse, which contains compliance information about PWSs and their violations of the National Primary Drinking Water Regulations as reported to the EPA by the state primacy agencies. The baseline is the data that was available on October 1, 2017. At that time, Region 4 had 318 CWSs with health-based violations; 23 of those CWSs were in Mississippi.

As of October 1, 2018, Region 4 had 282 CWSs with health-based violations, and 17 of those CWSs are in Mississippi. The figures below show the number of CWSs with health-based violations, the drinking water regulations violated, and the state-specific information. Figure 1 shows the number of CWSs with health-based violations for each Region 4 state. Figure 2 shows the largest number of CWSs with health-based violations was for the Stage 2 Disinfectants and Disinfection Byproducts Rule in Region 4. Figure 3 shows the largest number of CWSs in Mississippi with health-based violations was for the Stage 2 Disinfectants and Disinfection Byproducts Rule.

Figure 1<sup>5</sup>: CWSs with Health Based Violations - 3q2018



<sup>4</sup> Available at <https://www.epa.gov/planandbudget/fy-2018-2022-epa-strategic-plan>.

<sup>5</sup> Health-Based Violations Rule Abbreviation List on Page 11.

Figure 2: CWSs with Health Based Violations by Rule Type – 3q2018

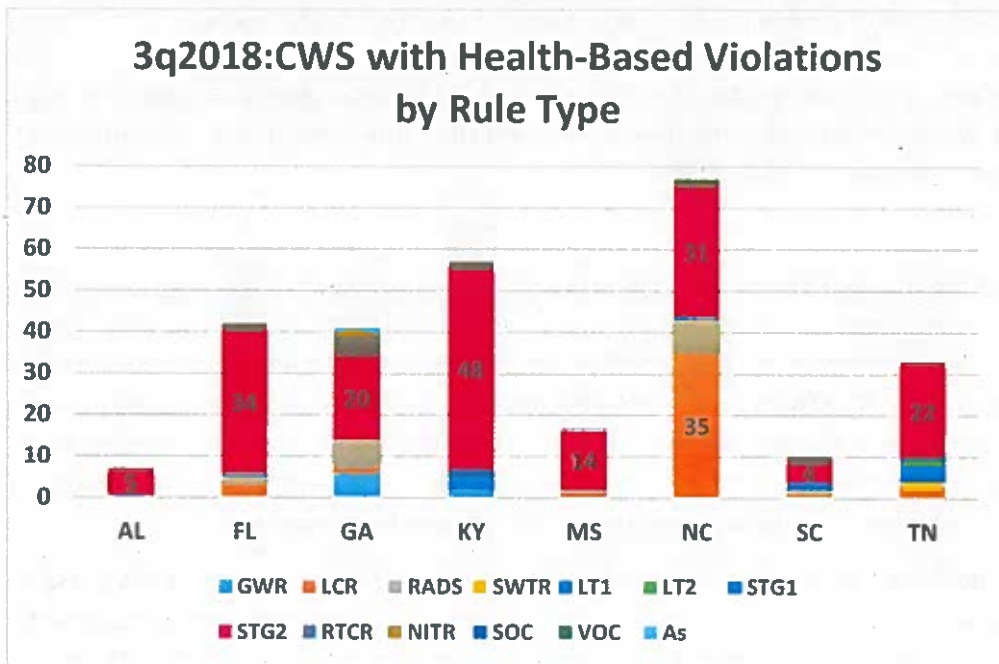
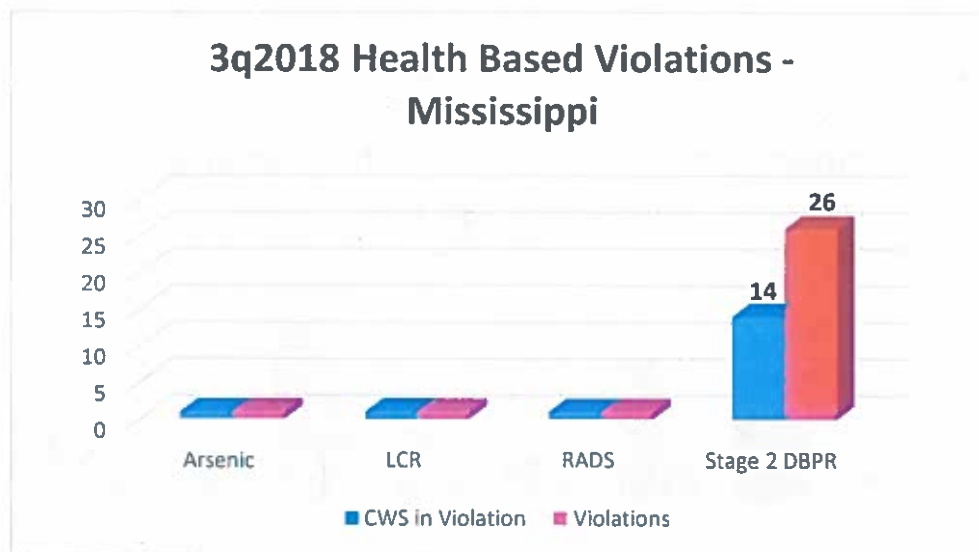


Figure 3



#### Data Management and Reliability

MSDH uses SDWIS/State to manage PWSS Program information and SDWIS/FedRep for reporting data to the EPA. MSDH uses the most current version (version 3.33) of SDWIS/State which ensures reporting on all drinking water rules. MSDH determines rule compliance using SDWIS/State's Compliance Decision Support module and some internal spreadsheets.

MSDH receives sample data from the MSDH State Health Laboratory and commercial laboratories by a combination of electronic data files or paper submissions. Paper submissions are manually entered into

SDWIS/State and any electronic data flows are handled with MSDH's customized SDWIS/State add-on applications.

MSDH is considering the possibility of transitioning its current electronic compliance monitoring data intake to the EPA's Compliance Monitoring Data Portal in the near future. As the EPA's SDWIS Prime project is in a holding pattern during 2019, MSDH will run quality checks on its SDWIS/State to keep it ready for a SDWIS Prime transition.

#### **Laboratory Certification**

Pursuant to 40 C.F.R. § 142.10(b)(3)(i), the State is required to establish and maintain a state program for the certification of laboratories conducting analytical measurements of drinking water contaminants pursuant to the requirements of the State primary drinking water regulations. To receive and retain primacy under the requirements of 40 C.F.R. § 142.10(b)(4), the State must have laboratory facilities available and capable of performing analytical measurements for all contaminants specified in the State Primary Drinking Water Regulations. This laboratory is considered the Principal State Laboratory and must be certified by EPA.

Principal State Laboratory: The laboratory is **Certified** through August 23, 2019. The certification status of each area of responsibility is listed in Table 4, below.

**Table 4: State Primacy Laboratory Certification Status**

Primacy Laboratory Name and Location	Laboratory Type	Certification Entity and Date of Most Recent On-site Audit			
		Chemistry	Microbiology	Radiochemistry	Asbestos
MPHL, Jackson MS	Primary State Laboratory	EPA (Region 4) 08/23/16	EPA (Region 4) 08/23/16	Uranium Only; EPA (Region 4) 08/23/16	
Eurofins/Eaton, South Bend IN	Contract Laboratory	SOCs Only; Certified by the state		Certified by NELAP	
Texas State Department of Health Services	Contract Laboratory	PCBs Only; Certified through reciprocity			
Contract laboratory currently out for bid	Contract Laboratory				X

Laboratory Certification Program: The program is deemed **Effective** through August 23, 2019. The number of contract laboratories assessed is listed in Table 5. The number of certification officers performing the audits and tracking PTs within the program is listed in Table 6.

**Table 5: State Laboratory Certification Program**

<b>Number of Laboratories Certified for Drinking Water Analyses In State and Out of State (*)</b>				
<b>Chemistry</b>	<b>Microbiology</b>	<b>Radiochemistry</b>	<b>Cryptosporidium</b>	<b>Asbestos</b>
2	5	0	0	0

**Table 6: Number of State Certified Auditors**

<b>Area of Responsibility</b>	<b>Number of Auditors Certification Officers for the Areas of Responsibility</b>
Chemistry	5
Microbiology	3
Radiochemistry	0
Cryptosporidium	0
Asbestos	0

**Health-Based Violations Rule Abbreviation List**

GWR	Ground Water Rule
LCR	Lead and Copper Rule
RADS	Radionuclides Rule
SWTR	Surface Water Treatment Rule
LT1	Long-Term 1 Enhanced Surface Water Treatment Rule
LT2	Long-Term 2 Enhanced Surface Water Treatment Rule
STG1	Stage 1 Disinfectants and Disinfection Byproducts Rule
STG2	Stage 2 Disinfectants and Disinfection Byproducts Rule
RTCR	Revised Total Coliform Rule
NITR	Nitrate and Nitrite Rule
VOC	Volatile Organic Contaminants
SOC	Synthetic Organic Contaminants Rule
As	Arsenic Rule